

**DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES
AT VILNIUS UNIVERSITY
(Interdisciplinary course)**

Scientific Area/eas, Field/ds of Science	Natural Sciences (N 000): Biology (N 010) Social Sciences (S 000): Psychology (S 006)			
Faculty, Institute, Department/Clinic	Clinic of Emergency Medicine Medical Faculty Institute of Clinical Medicine			
Course unit title (ECTS credits, hours)	Basics of Emergency Care 8 credits (212 h)			
Study method	Lectures	Seminars	Consultations	Self-study
Number of ECTS credits	1	1	2	4
Method of the assessment (in 10 point system)	<p>Presentation and evaluation of the report: the report is presented on a target topic, which is coordinated with the coordinating lecturers (the doctoral student must analyze, review and present the latest scientific publications related to the respective topic).</p> <p>Criteria for evaluating the report (minimum readable score - 5):</p> <p>(a) the relevance, novelty and relevance of the material submitted topics (2 points);</p> <p>(b) the general structure and scope of the notification, a clear presentation of the knowledge, argumentation, conciseness and specificity (2 points);</p> <p>(c) Summary, presentation and justification of conclusions (1 point);</p> <p>d) raising problematic issues, reviewing the application of knowledge in one's own presentation in the dissertation (3 points);</p> <p>(e) organization of visual aids, ability to take part in discussions, question management, oratory skills (2 points).</p>			
PURPOSE OF THE COURSE UNIT				
Course objectives – give profound theoretical and practical knowledge about emergency medicine. What are the terms of emergency medicine, what is the “golden hour” and definition of it.				
THE MAIN TOPICS OF COURSE UNIT				
Fundamentals of human anatomy, physiology, pathology, etiology of diseases, pathogenesis, symptomatology, diagnosis of symptoms and syndromes. Principles of disease prevention. Basics of etiology and pathogenesis of acute diseases and life-threatening conditions, symptoms of acute life-threatening conditions and their possible complications. Etiology of sudden death, diagnosis, primary and secondary prevention, and principles of initial resuscitation. Assessment of the main signs of life (consciousness, breathing, heart activity). Sports and Arrhythmias: Recommendations for sports, exercise, and driving in a variety of				

conduction and rhythm disorders. Protection of the caregiver, recommendations for resuscitation techniques in the presence of COVID-19 infection and other dangerous infections. How to resuscitate the unconscious, drowners, hangers, choking, airway control, choking mechanism, how to resuscitate - shock, sunstroke or electric injury. Life-threatening conditions due to acute diseases, drug poisoning, narcotics.

Dangerous conditions - in case of injuries, frostbite and burns. Pain relief, what is dangerous bleeding, the concept of dangerous bleeding, how to stop bleeding. Anaphylactic shock and first aid during anaphylactic shock. Defibrillation and features of defibrillators, automatic defibrillators, principles of their operation, indications for defibrillation, initial resuscitation skills, guidelines of the European Resuscitation Council. How to stop bleeding. What is polytrauma, first aid in case of trauma, immobilization of the affected area, the concept of the "golden hour", eye trauma, first aid in the case of eye trauma. Coma, coma scale, coma score. Acute coronary syndromes. Myocardial infarction with ST-segment elevation, without ST-segment elevation, principles of medical care. What are clusters and their benefits. First aid for ischemic and haemorrhagic stroke, stroke pathogenesis. The "golden hour" after a stroke. Convulsions, impaired consciousness, headache. Acute mental disorders, acute conditions and their management. What is a septic condition and sepsis? Prescribing antibiotics is what is too long or too short an antibiotic treatment.

What is therapeutic hypothermia, possibilities of therapeutic hypothermia in Lithuania.

What is organ donation, organ donation after death- myths and reality.

RECOMMENDED LITERATURE SOURCES

1. 2019 ESC Guidelines on the diagnosis and management of acute pulmonary embolism. European Heart Journal 2019.
2. Tintinalli's Emergency Medicine: A Comprehensive Study Guide, Judith E. Tintinalli, O. John Ma, Donald M. Yealy, Garth D. Meckler, J. Stephan Stapczynski, David M. Cline, Stephen H. Thomas, 9th edition, ISBN: 1260019934, 2019.
3. European Resuscitation Council COVID-19 Guidelines, 2019.
4. Europos reanimacijos tarybos gaivinimo gairės 2021 m.
5. The ESC Textbook of Intensive and Acute Cardiovascular Care / Edited by M. Tubaro et al. 2nd ed. Oxford, 2015.
6. Rosen's Emergency Medicine: Concepts and Clinical Practice: Volume - 1&2, 9e 9th Edition. Ron Walls MD (Author), Robert Hockberger MD (Author), Marianne Gausche-Hill MD FACEP FAAP (Author), 2018.
7. Cardiology: practical aspects. Mekhman N. Mamedov, First edition, Moscow, 2021.
8. European Resuscitation Council and European Society of Intensive Care Medicine Guidelines 2021: Post-resuscitation care Jerry P. Nolan, Claudio Sandroni, Bernd W. Böttiger, Alain Cariou, Tobias Cronberg, Hans Friberg, Cornelia Genbrugge, Kirstie Haywood, Gisela Lilja, Veronique R.M. Moolaert, Nikolaos Nikolaou, Theresa Mariero Olasveengen, Markus B. Skrifvars, Fabio Taccone, Jasmeet Soar.
9. European Resuscitation Council Guidelines 2021: Ethics of resuscitation and end of life decisions Spyros D. Mentzelopoulos, Keith Couper, Patrick Van de Voorde, Patrick Druwe, Marieke Blom, Gavin D. Perkins, Ileana Lulic, Jana Djakow, Violetta Raffay, Gisela Lilja, Leo Bossaert.
10. 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure Developed by the Task Force for the diagnosis and treatment of

acute and chronic heart failure of the European Society of Cardiology (ESC) With the special contribution of the Heart Failure Association (HFA) of the ESC
Authors/Task Force Members: Theresa A. McDonagh (Chairperson) (United Kingdom), Marco Metra (Chairperson) (Italy), Marianna Adamo (Task Force Coordinator) (Italy), Roy S. Gardner (Task Force Coordinator) (United Kingdom), Andreas Baumbach (United Kingdom), Michael Böhm (Germany), Haran Burri (Switzerland), Javed Butler (United States of America), Jelena Celutkiene (Lithuania), Ovidiu Chioncel (Romania), John G.F. Cleland (United Kingdom), Andrew J.S. Coats (United Kingdom), Maria G. Crespo-Leiro (Spain), Dimitrios Farmakis (Greece), Martine Gilard (France), Stephane Heymans

11. European Resuscitation Council Guidelines 2021: Cardiac arrest in special circumstances Carsten Lott, Anatolij Truhla' r, Annette Alfonzo, Alessandro Barelli, Violeta Gonza'lez-Salvado, Jochen Hinkelbein, Jerry P. Nolan, Peter Paal, Gavin D. Perkins, Karl-Christian Thies, Joyce Yeung, David A. Zideman, Jasmeet Soar, the ERC Special Circumstances Writing Group Collaborators.

12. European Resuscitation Council Guidelines 2021: Executive summary Gavin D. Perkins, Jan-Thorsen Gra'sner, Federico Semeraro, Theresa Olasveengen, Jasmeet Soarf, Carsten Lott, Patrick Van de Voorde, John Madarj, David Zideman, Spyridon Mentzelopoulos, Leo Bossaert m, Robert Greif, Koen Monsieurs, Hildigunnur Svavarsdo'ttir, Jerry P. Nolan, on behalf of the European Resuscitation Council Guideline Collaborators.

13. Adult Basic Life Support 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations Theresa M. Olasveengen, Mary E. Mancini, Gavin D. Perkins, Suzanne Avis, Steven Brooks, Maaret Castre'n, Sung Phil Chung, Julie Considine, Keith Couper, Raffo Escalante, Tetsuo Hatanaka, Kevin K.C. Hung, Peter Kudenchuk, Swee Han Lim, Chika Nishiyama, Giuseppe Ristagno, Federico Semeraro, Christopher M. Smith, Michael A. Smyth, Christian Vaillancourt, Jerry P. Nolan, Mary Fran Hazinski, Peter T. Morley, On behalf of the Adult Basic Life Support Collaborators.

14. European Resuscitation Council Guidelines 2021: Epidemiology of cardiac arrest in Europe Jan-Thorsten Gra'sner, Johan Herlitz, Ingvild B.M. Tjelmeland, Jan Wnent, Siobhan Masterson, Gisela Lilja, Berthold Bein, Bernd W. Bo'ttiger, Fernando Rosell-Ortiz, Jerry P Nolan, Leo Bossaert, Gavin D. Perkins.

CONSULTING LECTURERS

1. Coordinating lecturer: Pranas Šerpytis (Prof. dr.).

2. Robertas Stasys Samalavičius (Prof. dr.).

3. Ieva Jovaišienė (Assoc. prof. dr.).

APPROVED:

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University
15th of June, 2022

Chairperson of the Board: Prof. Janina Tutkuvienė